



Preface: Why "Zero?" A Brief Introduction to Project Zero

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## *Preface*

# Why “Zero?” A Brief Introduction to Project Zero

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D. N. PERKINS and HOWARD GARDNER

Mention that you are associated with Project Zero of the Harvard Graduate School of Education, and the first question you are likely to hear is a skeptical “What’s that?” Or sometimes you are simply misidentified: “Oh, that has something to do with zero population growth, doesn’t it?” Whatever the response, you certainly have to explain. The short version goes something like this:

Project Zero is an interdisciplinary basic research project in human symbolic development. We are concerned to understand the nature of cognitive abilities, their development in school, family, and other settings, and their mediation by a variety of symbol systems—language, writing, picturing, gesture, symbolic play, and so on. We draw upon the disciplines of philosophy, developmental and cognitive psychology, neurology, education, and the arts and sciences in general. The project was founded in 1967 at the Harvard Graduate School of Education by the well-known philosopher Nelson Goodman. The project’s initial mission was to examine the philosophy and psychology of the arts, with an eye to informing arts education. In the early 70s, Howard Gardner and David Perkins, original members of Project Zero as graduate students at Harvard and M.I.T., respectively, assumed codirectorship of Project Zero and still fill the role today.

Over the years, the interests represented by the several doctoral-level individuals associated with the project expanded to include a number of other themes besides the arts: children’s response to television, the early development of symbolic capacities, the nature of intelligence, the development of informal reasoning abilities, and the nature of higher-order thinking skills in general, to name just a few. However, the arts and arts education have always remained prominent foci of work at Project Zero.

As our interests broadened, our confidence in our perspective matured in other ways as well. During the late 60s and early 70s, we functioned principally as a think-tank—reading, reflecting, and writing. As the 70s progressed, we became deeply involved in a diversity of empirical work in

laboratory and school settings, probing the nature of cognitive development and cognitive skills and seeking to evolve better understandings of complex phenomena such as artistic giftedness and creativity. While that work has continued into the 80s, we have felt emboldened to embark upon several teaching experiments. We have sought to give concrete practical expression to some of our ideas in such areas as the teaching of artistic abilities, detection and nurturing of special talent, and the development of critical and creative thinking in general. The aim has not been so much to provide curricula as to learn more about the nature of the phenomena by observing how our ideas play out in practice.

While the foregoing sketch of Project Zero will satisfy some, others more curious will have further questions. A favorite is "When will you be done?" It's easy to understand the source of this question. We are, after all, called *Project Zero*, and talk of projects inevitably conjures images of putting a man on the moon, a dam across a valley, or the end to a quest. However, despite its name, Project Zero is not that sort of endeavor. We find ourselves now as always engaged in ongoing exploration, with new questions emerging as older ones become at least partly settled. The arrival of our twentieth year, and the kind invitation of Ralph Smith of the *Journal of Aesthetic Education*, provide a happy opportunity for us to review some of the lines of work in the arts and arts education that have occupied us in recent years. We hope that this issue will at once provide a useful introduction to those unfamiliar with Project Zero, a state-of-the-art report for friends and associates, and, for both old and new colleagues, a fresh perspective on thinking in arts education at a number of different levels of analysis.

One way in which we have sliced the complicated pie of the arts honors the boundaries of various artistic media. For example, in "The Art of Children's Drawing," Elizabeth Rosenblatt and Ellen Winner examine the development of perceptual, productive, and reflective abilities in normal and gifted youngsters. In "From Endpoints to Repertoires," Dennie Wolf and Martha Davis Perry highlight how the development of drawing abilities involves not just mastery of more sophisticated representational systems but the accumulation of a flexible repertoire including systems acquired earlier.

Addressing the language arts in tandem with television, Laurene Krasny Brown in "Fiction for Children: Does the Medium Matter?" examines how narrative rendered in writing or television media shapes distinctive responses in youngsters. Israel Scheffler, in "Ten Myths of Metaphor," informs our understanding by systematically challenging a number of facile beliefs about the nature of metaphor. The complementary "Children's Understanding of Nonliteral Language," by Ellen Winner, Jonathan Levy, Joan Kaplan, and Elizabeth Rosenblatt, traces the developmental

trajectory of children's increasing mastery of metaphor and irony.

The musical arts are also represented. In "'Happy Birthday': Evidence for Conflicts of Perceptual Knowledge and Conceptual Understanding," Lyle Davidson, Lawrence Scripp, and Patricia Welsh focus on the perception and production of simple melodies, highlighting how conventional musical instruction can lead to conflicts between the two. Lawrence Scripp, Joan Meyaard, and Lyle Davidson track aspects of musical development employing the power of contemporary technology in "Discerning Musical Development: Using Computers to Discover What We Know."

While considerable work at Project Zero has focused on particular artistic media and symbol systems, we have never been able to resist the lure of cutting across the arts and importing unusual perspectives to illuminate the arts. Thus, for example, Kathryn Lowry and Constance Wolf, in "Arts Education in the People's Republic of China," elaborate a picture of Chinese art and music education that discloses a number of intriguing contrasts with U.S. practices. Joseph Walters, Matthew Hodges, and Seymour Simmons examine the manifold opportunities afforded by computers as tools of musical and visual expression and review the potential impacts on education in "Sampling the Image: Computers in Arts Education."

From time to time, we try to rise above the trees entirely and get a perspective on the whole forest of the arts and art education by way of some central issue. Thus, David Perkins, in "Art as Understanding," lays out how certain misunderstandings not unlike those found in science education can interfere with learning in the arts. Vernon Howard in "Expression as Hands-on Construction" examines a number of misconceptions about the role of the emotions and of intention in artistic expression. In "Artistic Learning: What and Where is It?" Dennie Wolf describes through a compelling case study of one student a portfolio-based approach to fostering and assessing artistic growth evolved at Project Zero. In "Toward More Effective Arts Education," Howard Gardner addresses point-blank the educational challenge in the arts, urging the necessity of parallel attention to contributions from philosophy, psychology, artistic practice, and the ecology of educational systems.

The many perspectives of these articles may lead one to wonder about the tight focus intimated by the word "project" in our name. Indeed, our efforts are diverse, reflecting varied interests of the several individuals who have been associated with the project for some time. However, this survey of titles and topics suggests what a close look at the articles confirms: A number of core convictions mark and unify our enterprise. We share a belief that the arts, usually celebrated as the dominion of the emotions, are profoundly cognitive activities; a belief that human intelligence is symbolically mediated through and through and must be understood from the

perspective of symbolic development; a belief that creative and critical thinking in the arts and the sciences have far more in common than is often thought; a concern to study and understand the psychological processes and resources underlying some of the peak achievements of humankind.

A celebration provides an opportunity to look ahead to the work that remains to be done, but also an opportunity to look back in gratitude to those who have helped and supported us in the past. We wish to acknowledge here valued colleagues who joined forces with us in the early days of Project Zero: Founding Director Nelson Goodman, Jeanne Bamberger, Frank Dent, John Kennedy, Diana Korzenik, Barbara Leondar, and our late esteemed friend Paul Kolers. And with deep appreciation, we acknowledge the many private and governmental agencies that have supported our work: The Carnegie Corporation, The Livingston Fund, The John D. and Catherine T. MacArthur Foundation, The John and Mary R. Markle Foundation, The Milton Fund, The National Institute of Education, The National Science Foundation, The Rockefeller Brothers Fund, The Rockefeller Foundation, The Alfred Sloan Foundation, and The Spencer Foundation. For support of this publication we thank the Ahmanson Foundation and also our cherished colleagues Lonna Jones of the Rockefeller Brothers Fund and Ralph Smith of the University of Illinois.

This rounded sense of mission, involving invaluable support from many quarters, resurrects the classic question of them all: "With so much on your agenda, why 'Zero'?" We can trace our odd name back to our founder, Nelson Goodman. He had more or less this to say when he announced it: "The state of general, communicable knowledge about arts education is zero. So we are Project Zero." Here as always, he meant his words to be taken with precision. To be sure, many gifted teachers existed in the arts, who knew something about how to impart spirit and ability to their students. But what about *general* and *communicable* knowledge? There seemed to be little enough of that, so Project Zero we became.

"And are you still at zero?" Like so many answers, the reply depends on how one measures. We think that we have teased out some important questions and gone at least halfway toward answering some of them. So in absolute terms, we are well beyond zero. On the other hand, we don't seem to be running out of questions. While our accomplishments are certainly very finite, the domain to be addressed shows no signs of being anything but infinite, and by that gauge we are still virtually at zero. That gives us one excuse for hanging onto the name. But another probably has more force: Nelson Goodman has always been fond of saying that one way to teach is to create fruitful obstacles. Maybe our 'zero' is like that—it teaches us by giving us something to live up to or live down. We have lived it up and down for twenty years now, and, as often happens with fruitful obstacles, we've grown fond of it.